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Robin Satty 0:01

Summative and formative assessment, I'm introducing them in the wrong order, but I have a reason for doing so. Summative assessment provides the data on what students know it's the test you give at the end, it's the unit test. It's the big test data, the ACT that a lot of our students took yesterday. It happens after instruction, and it provides a lot of data on how what the kids know. Formative assessment on the other hand, is the assessment that occurs while we're instructing it provides data on what the students know, but because it occurs during instruction, it can be used to modify instruction.

And so today we're gonna be talking about formative assessment. I know we know summative assessment, all of our students take the test, we know that we probably track their scores, follow up with them as best as we can to get those scores and see how they did. But you can't just base your instruction off of what the last few. We need to figure out while we're working, what we can do to help the students the most. Here's just a few details from the literature on why formative assessment is important. It provides information needed to adjust teaching and learning while they're happening feedback helps us the tutor and the student identify gaps and determine the best way to close them. Let's be honest so the student can do the reflection and review on their own. We just sit back and launch help students see that improvement is possible. This connects to the growth mindset that we've talked about, and better formative assessment actually improves and accelerates learning, especially in low scoring students and those with learning disabilities, and all of citation for all these papers are on towards the end of the slideshow, you shouldn't have an easy word.

In short, the goal of formative assessment is to see what the student notes, compared with the student knows to what the student needs to know, or identify the gap and then figure out the most, most productive path. I say productive not efficient, because efficient is not always the right answer. Sometimes, a student needs you to stop and teach the concept because that's going to be an important concept to learn, even if the faster way to solve the problem would be to plug in the answer choices. Sometimes you need to skip the concept and teach the kids to plug in the answer choices because that's going to be faster luck. It's about figuring out what the kids needs, and what's going to get the most bang for their buck, what's going to help them the most give them the highest score increase, or whatever your goal is in the shortest amount of time.

So when we collect formative assessment data, you want to prioritize high yield, high leverage skills, you know, the student is scoring a 28 in ACT math and I use that example because I do a lot of ACT math and I know a lot of you do too. A student scoring a 28 and ACT math wants to bring their, their score up by a couple of points, and they miss a multiplying matrices question, which is shown up like once in the last 10 years, I have to Google it every time I teach it because I certainly don't remember the formula for for dot products of matrices. It's not worth your

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time to even figure out why the student got that question wrong move on and go on to something else.

On the other hand, if a student misses a redundancy question because they didn't realize that that word already existed in the first half of the sentence that wasn't underlined, you're going to want to review the concept of redundancy and what those questions look like and what to look for. Think about high yield, high leverage. High yield is something that shows up a lot and often. High leverage is a little skill that you can teach that goes a long way. Teaching students to plug in answer choices when they don't know what to do, is high leverage because it's going to make the difference in a lot of different questions in a lot of different areas.

Never assume, never ever assume. Don't assume students know something, don't assume students don't know something, unless you've seen it, unless they've explained it to you directly, don't assume what a student knows.

Quality over quantity of formative assessment: you want to get some really good information, at really strategic points. It's not about assessing them every minute for every single question. And then consider the cost versus benefit: what's the cost of doing a whole unit on matrix dot products, and what's the possible benefit for a student who might earn a few more points by reviewing, say, special right triangles.

There are four main ways we can collect formative assessment data. I've seen a lot of these things from you in discussions in the tribe and a lot of the ideas that I'm going to share, I've seen, we can think about this is a sort of a roundtable where you don't have to do a lot of the talking this morning because I've collected a lot of the ideas from you. Practice observation, questioning, and self assessment. And we're going to connect each of these different strategies to the two questions we looked at, at the beginning of the session. First, practice deliberate practice occurs when an individual intentionally repeats, an activity in order to improve performance. We know that we do that a lot with our students practice is really important, but how can we use practice to collect data on students. Now looking at these two questions that we looked at before, you're not gonna be able to read it up there so don't even try but they are the same questions that we talked about the student had a B on both. What sort of practice opportunities what drills what questions can you give them that will both help them practice a skill and also understand what they do or don't know anyone have any ideas that they'd like to share?

Participant 5:57

Go through several tests and identified similar questions, and then talk through like why they're the same, and whether they can do the same thing next time. That's really great strategy.

Robin Satty 6:08

Any other ideas? Mike I know that you, you've got a great product.

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Participant 6:16

So, I would just do Mathchops and see what they've done. I mean the first thing I would do. Anytime you visited. I would just say like, how are you thinking about this, and I wouldn't say a word until they explained it because I don't know that they forget what the meaning was Did they forget what the median is do they handle fractions.

Robin Satty 6:36

Yeah, and that's an asking them questions, actually, in anticipation of the next strategy that we're going to get to but I was gonna say I use math chops for this if you're not sure how a student is about something maybe they can explain it but you're not thrilled with their estimation, maybe you don't have the time to go over that particular concept with them, you know, send them to a math chops quiz on that particular concept or, you know, give them a few questions look give them some practice test, ask them to look for those kinds of questions and work through those kinds of questions.

Some other ideas. Give them a full test, see if they miss the same questions again, that may be high leverage if they help a whole lot of things. That might not be the best way to target one specific concept. You could do drills on particular concepts, you could do last number drills. Maybe the student is having difficulty getting started with last 20 math problems. You could try word problems drills, maybe they're having difficulty interpreting word problems. You could try redundancy question drills, you could quite try quick single passages, maybe you don't want to give them a whole test but give them one writing passage to collect a little more data. Also maybe it was a vocabulary issue maybe they're unfamiliar with those words. There are websites like freerice.com that that can give you a good idea of a student's vocabulary understanding, it just drills them on vocabulary questions and for every question they get right and donates rice to some people who don't remember who. And then there are also sources where you can get a curated list of questions by topic, there are some more folks that do that, like the ones that we got yesterday 1600.io would probably be really good for that.

Strategy number two, observation, what evidence can we gather of student learning, to inform instructional planning beyond just the answer choice. Somebody pointed out I think before when we saw the student answers which is they didn't show any work. What does it tell you when a student has not shown work, and got a wrong answer, What might, what does that mean.

Participant 8:43

It could mean they're guessing.

Robin Satty 8:45

Yeah, I mean their guesses could mean they don't know how to do it. Or it could mean they know how to do it but shouldn't take it out before they use a calculator.

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Participant 9:06

They could have been out of time.

Robin Satty 9:09

Or they could have been out of time. Yeah, absolutely. Other things you can observe about students. In addition to work shown or lack thereof, their body language, How do they feel about that question. We've all watched a student doing a question and you see [sigh]. That says a lot, even if they know the answer, it says a lot about what their mindset is and maybe something to address that's not directly content, process of elimination, did they eliminate the right answer, or were they choosing between the two like best answers, because that, that gives you different information for students in a different place. If they eliminated the right answer then if they were really stuck between two close answers on a reading passage for example, is it test anxiety.

Did they know the answer and then decide there's no way they knew the answer to number 45 I'm just going to pick something else because there's no way I would have gotten that right. That's a whole other issue, or is it time management, do they run out of time and just guess a question. Did they use a strategy that you've worked with, which is focused on Question one through 40 and then guess on the rest. Where does that fit in their strategy, where does that fit in the best strategy to help them get their best score. And then my favorite strategy for formative assessment, probably the one that is used most is questioning elicit responses that can be assessed things like, why did you get this wrong. Do you know what I mean is, do you know what redundancy is you know what this question is asking, but this question can also be the hardest to do properly. So what are some other questions that you might ask the students in this scenario. I'll ask him to explain to me, there's steps in getting. That's always a good one. Anyone else. Now that you know that problem is wrong. What, why do you think it's wrong questions. And sometimes and I would say that for some students that's going to work. Those are some of my favorites, and sometimes it's really just a Did you mean to choose that one.

Participant 11:16

For me it is a great question because I'm on zoom all the time, and so I have this on PDF. I crossed out their answer and said, so this was incorrect but what's your second pass. Yep, I miss either thing then if they didn't solve the problem. That works really well. It gives you this other shot.

Laura Link 11:41

Once I've gone through exactly what y'all are saying, I always make sure that they tell me now tell me the steps to get to the right answer. Why is the right answer right.

Robin Satty 11:55

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That's always fun, especially when you see the work and the student has gotten 90% of the way there and they just needed one more thing. You know how many of you have had the student who did all the math work but their answer isn't a reduced fraction or it isn't a mixed number and they think well I didn't get an answer choice it doesn't match, you just want to show them kindly that all they have to do is plug it into the calculator.

Participant 12:21

Before they start working on your math circle or underlines what they're asking and the questions. Yes, like, yeah you know the diameter within one of the radius. And, and I noticed when the answer sheet really reached the right answer and I go back to your headline, what, what happened here.

Robin Satty 12:44

And that's really great use of observation of seeing that they raised the correct answer. That says a lot. I like, of course, underlining reviewing what they're asking. And I think that's really important everywhere but the ACT will really get you on. Oh no, they're actually asking for five y plus two, they're not asking for Y, even though that's obviously what you're solving for.

Participant 13:06

And when I find a question was really hard and I got it right. I know it's, wow, how did you get that? And they go, oh, I guessed. I want to know that.

When the student has understood our discussion, I asked them to teach it back to me. And then I know that they understood.

Robin Satty 13:29

That's fantastic strategy.

Participant 13:31

I think the wording there has to be spot on not, don't tell me what you did, but truly teach it because otherwise they just read back through the steps like Okay, first I did this, first I did that, and then you got to follow what. But why did you do that?

Robin Satty 13:45

and that's going to show you whether a student can answer this question or can answer any other question, that's like that, whether they can apply that kid got the answer by this big problem solving, we do it, I would decide what's the concept how often is possible to show up, and how often does the concept Good show up in a, in a context where you can use back solving to figure it out, the student should know how to solve a basic two step outbreak equation, but facts, all this is sometimes the fastest way to do that and so that's the point that I would go through, if it's a particular question where maybe they, the wording was intentionally confusing and they figured it out with back solving instead of actually interpreting the question,

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depending on where their score is that might be sufficient and reinforcing and reinforcing that could be helpful.

They're kind of three. Three things you can look at when you're doing your questioning. You can ask about content. Do you know what a median and a prime number are, you know, what's the formula for mean, what is redundancy. Metacognition which is thinking about thinking, what were you thinking here. What did you do wrong here, what were you thinking or what did you misinterpret this is the part where you get them, I didn't read the question properly. The next one process is what to do, which is where you can then push them and say, Great, that's not good enough. What do we need to do, so that you can use that excuse that next time. What are you going to underline or you can underline what they're asking for, What do we need to review what were you unsure of what were you sure of, you know what, what specific thing can we do, what process that you can show up on test day and say, I know what to do

Participant 15:48

here. I was gonna ask. Yeah, you're I helped them we'll have a kid. Oh I read it wrong, or it will give me some answer and it's like a little bit, oh yeah I know that, but it could be taking a break, that when it's kind of that repeated, almost like the defensive. Oh yeah, oh yeah, yeah, I know what I need to do or I made a silly mistake here to kind of crap that. So, for lack of a better word, that it's okay like I'm not judging you, if you get it wrong, our goal is to get it right.

Robin Satty 16:27

And that's one of the challenges of questioning is that sometimes the words that come out of their mouth, don't tell the whole picture.

Participant 16:33

I get so many times. Hey, do you know what, blah blah blah, is, and they're like yeah, and then I'm like, Okay, what is it, and they're like, all the time like the majority of the time that's what happens. So, yeah, I think it's really important to ask that. Oh you know what it is. Great move on now you don't want to do that. Do you know what it is. Oh, what is it, it's really important to follow up with that question,

Robin Satty 16:56

I get that a lot in ACT science. Do you know what pH is, yes. It's interesting, you don't actually have to know what pH stands for, just a few things about it. I

Participant 17:09

t's always that I know it guys I just can't put in words. Yeah, right. You don't know what it is. I mean for me to just like avoid all that to give them a new question.

Robin Satty 17:25

Yep, that, that is, that is a great way to do it the test is not going to lie.

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Participant 17:30

Yeah.

I just don't go to the line that I use in the situation you mentioned which is I say early on that we are working off the principle that you only know as much about something as you can explain to someone else. And so from now on, you should expect that I will always ask you where you'll be.

I like that,

and along the lines of misreading it's kind of the same thing they'll say I misread the question. And like I feel like that's kind of a throwaway response sometimes what how did you actually miss read it or did you like not get, there are so many English questions you just missed the key word for me and spiraling and spiraling, but other questions when they said it via correctly what they mean is I had no idea but the question was talking about in the first place, which is a bigger problem,

Robin Satty 18:12

That that's actually the first thing you said, is a really good idea and it's a good segue to my next slide where you said, just assume I'm always going to ask you why you got an answer and say that to students, which is, I guess my other favorites, I think I already said another one with my favorite, Here's my other favorite strategy. Self-Assessment, which is letting the students spot their own strengths and weaknesses. You know who's had that moment where you're going over a question a student says, Oh, I made a mistake on that concept, here's what I need to do, I'm gonna write it down. Next time when I see that I'm gonna do this, and you're just like counting your money while the student does the work. That's that's the best because you've not only taught them the math concept, but you've also taught them the skill of self assessment, which will help them forever. So how might you use self assessment, how might you have the student assess themselves on a question like this and some of what you said before regarding questioning kind of fits this. What did you do wrong. What did you miss here. Any other ideas of how you can use self assessment with students.

Participant 19:25

More so, I think the key question that at that point Robin is you say, what is the correct answer and why. Follow along. Now, teach me the correct answer, and give them the opportunity to just identify the correct answer and work through it.

Robin Satty 19:41

That's great and that also works well with a student who got it wrong, you know, why did you get that wrong and what makes that wrong as one right, That's, that's often a hard one is, I see why this is right. I don't know why this one's wrong.

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Participant 19:53

I think it's awesome opportunity, what your customer is talking about process to differentiate between, especially for kids who have like low confidence ability differentiating leading states from a math concept and saying hey if you get a match. Most of the time it's a computational thing, it's not an existential crisis, you know. So differentiating some of those and then calming that anxiety, so that next time it's not like

I just think we can assume that kind of pick out a break, we, that they know what the skill, or the concept is, so I think it's very important to, to make sure that they even the ones that get it right. They tell you the process they went through because a lot of times, they could have spent two or three minutes on it, and they may not know the shortcut. Yes, so, I think

They guessed correctly, or they could have just guessed this wonderful conversation. So many of these questions or they go all the way to the top, I mean it's basically Firemen's Cargo Cult essay where he says, a lot of my colleagues, you ask them, How do you know what you know and that turns out they don't know. The question you're suggesting, which I think is wonderful, someone else may have both that in the middle of an interview and she turned out she didn't know the answer, like do you know what that means. I mean it's, it happens at every level of science and writing, and we shall be asking ourselves that

Robin Satty 21:31

It's true, I mean how many of you really explain how you know these things. I mean, a lot of you are very very good at teaching these concepts, but things that you don't do on a daily basis a weird concept comes up, or occasionally, to me it happens in the English section. Occasionally you look at something and you're just like well that's just the way we speak in English language, and you can't necessarily explain that the rule behind it.

Participant 21:57

but there's a larger proportion of idiom and idiomatic questions on the grammar, on the new SAT, which are also possible to explain, almost by definition, can't explain why culture,

except that you can explain how do you deal with that. Like, you don't spend much time on it because this is clearly something that either you kind of know or you don't. I mean,

yeah, that's my process for my kids with 95% regrets, and it's really idiomatic compliments because when I was learning French I would fuck them up and waiters waders smiling, laughing I was saying, I would like more sugar onto this, you know, but that's what the students are doing.

And the best homework for learning those idioms, go home and watch TV. Read a book too maybe, but go home, watch TV, take in, but



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Robin, can you explain why I'm still a little bit shaky with the difference between self assessment and questioning except that questioning comes from us but then, ah,

Robin Satty 23:03

No that's a good segue. It's exactly the same as questioning, but they're doing the heavy lifting, it's who's doing the work here who's doing the heavy lifting the hard part of the thing. You can give students questions. I know that Phil McCaffrey actually has a really great cover sheet on all of his practice that all the ACT's he takes a TIR and he gives the students a cover sheet that says, you're going to follow these steps you're going to take the test, you're going to score the test, you're going to go through and you're going to mark up the tests. These are the questions that you got wrong but now you understand, these are the questions you got wrong man I don't understand. And I think there are a few more items on it. Yeah, reflection, reflect on, on, on your performance and that's, you know, I mean that's one of the best things that you can do because when the student owns it, then, not only are they more invested, but they're also able to do the same thing when they get a test back from school, but they're not happy with. This is something that you know when they get feedback at work that they're not happy with.

Unknown Speaker 24:16

So I try to do this and like the error log and have them be really processed-oriented or something, but a lot of them and when I assign that kind of homework, no it doesn't work or throw it away, it's like less important than just doing fresh practice or anything like that. So I'm wondering if anyone's had success with like getting kids to take review and, like, review and that type of practice more seriously then what do you say,

Robin Satty 24:41

I usually just say if you want the best bang for your buck you do as much work as you can on your own so that when you come to me and you have a new seeming one hour and a week. We want to spend the time on the ones that you have most trouble with, we don't necessarily need to go over every single question where you just miss read what they were asking and all you need to do is just underline what they were asking for those. And then, you know, I kind of leave it on them, to, to decide that that's important that that's an important use of their time, And you know what there's some students that are taking four AP classes and are barely struggling to stay afloat. And they really don't have the means to do that reflection, and that's okay we go through the session and we figure out, having not done the reflection, how can we best prioritize questions are not ideally they would all be the reflection. Any other ideas on how to.

Participant 25:34

Well, I was gonna say sometimes I see that as a balance of either they could get if they can get the whole, if they get a practice test done during the week and do reflection, then great, but if

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they can't and it may be better to assign a little less work so that they can reflect on those answers that they're getting.

And then have some way of, I have to put some kind of accountability in there, like I want to see the, you know, whether it's a reflection sheet where they're actually, because I mean kids are, I mean I always tell them, it's not bad that you do this is like how you survive in school, you, if you don't have to show it, then you're not going to show it because it's easier not to, because it's to it because yeah,

I also tell them that's where their improvement comes is from. This is what you got wrong, you've got to study it, to the point where if you see it again you're going to get that type of question correct.

I used to assign them to go back and read the problems that they got wrong and the explanation but I realized it was a little bit too passive, number one, they weren't doing it at all. So now I actually have them print the practice tests, because it is portable, it's easy for it to go with them wherever they go. So they print two copies, because most of the kids are missing half the problems I don't know if your kids are but when they're first starting out, they're missing about half or more of the practice problems. And so, The problem is they aren't wrong, they actually have to completely redo it because there's such a huge difference between that passive reading it and actually getting that problem fresh again and what oh no, do I remember what this is working said,

Unknown Speaker 27:13

and I feel like I've also seen that the opposite where they go through do a thorough reflection come to you with like four more questions that they just needed help with. And then you say, alright, but there's still more room for improvement here let's go over the ones that you said you understood and let's you know try and collect more data from that. See, the last item is modeling, modeling for students, here's how I would go through the problem. This is where I would make a mistake, I would give a perimeter instead of the area because I would have missed that question, or I would have mixed up those two variables and, you know, given the wrong answer and modeling that for students, shows them first, what they can do to help them learn and show what they know and figure out what they know, but it also models for them that making mistakes is not like a bad thing. It's an opportunity for data.

Participant 28:08

I can Can I say something, I'm sorry. I think that's really important for every student. Well, many students to see us make a mistake, and how we, what we say to ourselves, you know, because I can say, don't beat yourself up, but if I'm beating myself up. I really should know better.

Robin Satty 28:26

And who's never actually made a mistake while trying to teach the students something?

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Laura Link 28:31

Some of you may know I'm a classroom teacher as well as a tutor, so something that is synthesized in classroom teaching that sounds like what you're saying I just thought it might be helpful. It's called gradual release, and it's, I do. We do, you try, you do. And so it sounds like there's many ways to put together what you're saying doing that. And then the final thing that we can do sometimes is you teach, as the last after you do successfully, like in my ACT prep class in school, I didn't have them teach appear or even assign them to something. So if we did group classes even on Zoom, we could add that you teach part.

Robin Satty 29:13

Something that I like to do to explain to students is when there's a question, a high leverage question that will show up on every test. I'll say to them, I'm going to walk you through this problem right now, all I want you to do is follow my steps and understand what I did and it's okay if you're thinking to yourself, there's no way I would think to do that on the test. And then the next time it's: Now I want you to follow along, but no where I'm going, and you can ask them like what's the next step, what do I do here. And then it but it's okay if they still don't think they can get it on their own. The next time you want them to be able to get started on the process on their own but maybe need a little prompting to get through it, and then they'll learn to get the question right, and explaining that to them first helps them get comfortable with the idea of, I see what you did, but I could never do that, but it also helps them know that there is a process to go from not knowing how to do it to knowing how to do it, the process can take many steps, and most of those steps don't get you the point, it's only the last step that actually gets to the point so you can be making huge progress without actually having your score go up right then and there. And something that I've seen is you tend to have a student for at the same score for a few sessions and then all of a sudden you get the whump. Yes, and it's great to see.

So those are the four main ways to collect formative assessment data, you all have some great ideas of some things and hopefully we were able to share a few new tools. A couple more quick thoughts I wanted to share how to modify instruction you want to prioritize the high yield high leverage skills you don't want to spend hours talking about a concept that only shows up once and then consider the most productive tasks, sometimes it's figuring out the test strategy that's going to get you there. Sometimes it's going through a whole lesson on basic algebra skills because they need to have that. There are four ways you can go about modifying it or four considerations to make when you are modifying instruction, you can take content, like in those examples we talked about earlier properties of numbers statistics and probability redundancy vocabulary. You can teach a specific strategy, identifying that kind of question, or deciphering word problems in math or alternative strategies like guessing chap or process of elimination, or the reading aloud strategy in English which can be hit or miss for different students and see what sounds good.

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You want to consider depth. Are we redoing their entire 10th grade math education for some students, that's what they want, or are we just reminding them of the formula for a special right triangle. Are we reminding of a detail or maybe we're just reviewing one particular concept. And then, accountability, there's accountability for them, and accountability for you. It's really easy to say, Oh, I've taught them that they know it, but do they? How will you know they've learned it. Keep in mind, make note that next week when you're going over their test this particular question shows up again here. Did they get it right. How will you know they've remembered it, make a little note, check on it as a few weeks time. Did they retain that did that work, and that's data on your performance. Did your strategy did your questioning work, did it work efficiently. Did it work effectively. How will that help you for next time.

Some additional considerations, if you're working in a group. It's a lot harder to collect data and because there are more students, more data you want to triage, maybe you want to skip the questions that only one person got wrong and focus on either the ones that lots of students got wrong, or ones that show up multiple times on the test. Spreadsheets are always the answer. If you take a student roster for your class and put it in the first column, and then write down a couple of question numbers that you particularly want to make note of, maybe you're looking at some practice test, maybe they're doing drills in the classroom, you can say, I'm really worried about their understanding of solving two-step algebraic equations, here are three question numbers and their drill that deal with that, I'm gonna walk around and check off, who did it, we did. You can also do it, I want one question on algebra one question on special right triangles and question on, you know, idioms, and, and go through because sometimes what you see on your spreadsheet, does not match what you thought was going on in your classroom, and there's a lot, It's, it's easy to assume what your students know. The data are there to keep you honest and make sure you're doing the best for your students that you can.

You can also plan ahead. What happens if half the students got a question wrong. What happens if 75% of the students got the question right, is it worth stopping the classroom teacher lesson. What happened in 90% of the students got the question right. Do you want to stop and go over it quickly, or do you want to just make a note to check in with those couple of students at the end of class. Think ahead what works for you, for that content for that class.

And then the last additional consideration, virtual tutoring, I think we've all gotten a chance to try it this year, there are some advantages, there are some disadvantages. The biggest disadvantage is you can't see the student you can't feel what the student is feeling, you can't see their paper, question, question. Keep asking them, keep asking, do you notice what do you know, explain it to me as to scenario answer sheet, ask them to hold it up, did they underline what the question was asking or did they just say they did. It's really funny when they tried to do that and then wrote the sheet up, you can tell. Ask how they feel. Did you feel good about that. Did you think you got to 22 on that section, or did you think you got to 30 What did it feel like?

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And then use visual tools. The Zoom reactions, Emoji things can be really useful when you're working with a large group, especially because you can gauge how they feel, over a large scale. And then, even things like thumbs up, give me a thumbs up fairly confident, or on your fingers, five is super confident I could teach the class, and one is I have no idea what just happened. Hold on your fingers and tell me how you feel. It's halfway between anonymous and super in depth, it gives you a little bit of data across a large group.

So in summary, you want to prioritize, when you're doing formative assessments, you want to prioritize the high yield high leverage skills, the ones that are ones that are going to show up a lot. The skills that are going to be questioned in many different ways on many different tests, and then high leverage skills, the skills that show up in a lot of different places on the same test, the foundational skills that will be assessed in many many different ways, learning how to read a math word problem, is a really good example of a high leverage skill because you need it to show off all of your other skills. You can use practice observation questioning and self assessment and you all shared some really wonderful strategies today, and then consider the most productive path. Do you want to teach content, Or do you want to teach test strategies, maybe a little bit of both. Maybe it's worth going through both ways, go through the whole outbreak solution, but then also show them how it would have been faster if you would just put in the answer, sometimes that's what the student needs to see. Consider the depth, how much instruction are you giving on this concept and accountability, how are you going to know that you were successful. Here are some citations of everything that I referenced in the text. If you happen to really like academic education reading there's some really interesting stuff in there. And then feel free to click I especially recommend the this link right here is a whole PDF on formative assessment with a whole bunch of strategies and some anecdotes and some ideas for Ignite you don't ever again.

Laura Link 37:33

And we will be sharing the slides I don't think we have established what method that will come in but we will be sharing the slides so you will have that. Do we have time for questions. I know, I think maybe one or two.

Robin Satty 37:48

Many of you, asked questions as I was going, which is the biggest compliment to me inas the teacher and I really appreciate that you were willing to do that, but are there any more questions?

Participant 37:57

I asked a question as students when they're making silly mistakes. I ask them how much sleep they get.

Great question, sleep,

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I ask them where do they study, like exactly where it is, ask them what their distractions are but mostly I had two clients years ago who were sleep doctors and they showed me studies, strongly suggest getting another hour of sleep is probably more productive than another hour, hour of study and I just see some kids who think they're not really. They're not really functioning. So often, that will solve some silly mistakes.

Laura Link 38:36

A lot of times we see them when they are off their ADD meds. We see him on weekends or after school. I've noticed that sometimes I'm like, what, and he was like, Oh, I'm not on my meds,

Robin Satty 38:49

Or when you hit them at that, whatever 4pm moment and you just can see it. Alright, meds are off let's change the strategy to something totally different right now. There are a lot of things outside of test prep that are important to test prep and that are really important for students to learn about taking care of themselves about being productive about, you know, sometimes you need to take an A minus, so that you can survive another week.

Participant 39:18

Yes, sometimes asking students, how do you feel on the test, garners such a range of responses, we could talk about it, oh I felt great. When did you do it? Yesterday and this morning. So do you remember doing it? Yeah. How did it feel? I don't know.

Laura Link 39:37

Thank you, Robin. This is amazing.

Robin Satty 39:45

Thank you so much

Laura Link 39:45

If I could ask you all if you have a second, grab your phone, go to the on Facebook if you're on Facebook national test prep Association, if you search for NTPA you will find the national tractor pull association. So national test prep, on Facebook, if you haven't liked it already, please do. And please notice some of the threads I have started to share your notes to share what you like to shout out a great way to give thanks to our awesome speakers, is to thank them by name and put out some of the tips that they did because then that's public that gets shared and it's a great way to thank them. Thank you.

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